Pulmonary Hypertension

Pulmonary hypertension is a disease caused by rising pressure in the arteries that carry oxygen-poor blood from the heart to the lungs. Symptoms include shortness of breath during routine activity (for example, climbing a flight of stairs), tiredness, chest pain, and a racing heartbeat. As the disease worsens, its symptoms can make any physical activity difficult or impossible.

In 1985, people with pulmonary hypertension faced a dismal outlook: Only about a third of them lived five years past their diagnosis. Up until the late 1990s, the best their doctors could do was to ease their suffering as the disease progressed and ultimately caused heart failure and death.

Even though there is still no cure for pulmonary hypertension, research supported by the National Heart, Lung, and Blood Institute is making an impact. Studies have led to eight Food and Drug Administration-approved drugs to treat the disease.

While pulmonary hypertension is still considered a rare disease, it may be more common than once thought. It appears to occur in some of the millions of people who have other lung diseases such as asthma and COPD (chronic obstructive pulmonary disease).

The annual number of U.S. hospitalizations attributable to pulmonary hypertension spiked from 1980 to 2002, especially in women. Scientists suspect that this uptick is largely because physicians are more aware of pulmonary hypertension and have changed how they diagnose and report the disease.

NHLBI-supported research continues to solve pieces of this puzzle. Scientists now have evidence suggesting that pulmonary hypertension is less a problem of blood flow than one of cell growth. This could explain why currently available drugs only have a modest effect.

Continued research on this enigmatic disease could help doctors diagnose pulmonary hypertension much earlier, when it can be managed more effectively.

Imagine the Future ...

Doctors use miniature imaging tools to scan the lungs for problems before symptoms show up.

Stem-cell therapy delivers replacement tissue to damaged lungs.

The NIH's National Heart, Lung, and Blood Institute provides global leadership for research, training, and education programs to promote the prevention and treatment of heart, lung, and blood diseases and enhance the health of all individuals so that they can live longer and more fulfilling lives.